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CALFED Environmental Water Program
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Lessons Learned from Water Purchase Programs of the Past

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INTRODUCTION

Before undertaking development of the Environmental Water Program (EWP) framework, it was considered prudent to examine past efforts to acquire water and to learn what problems were encountered and what issues are likely to be raised during the development of the EWP. Through this effort, the CALFED Bay-Delta Program (CALFED) agencies hope to structure the EWP to avoid as many problems as possible and to develop appropriate mitigation measures for those that cannot be avoided.

Research for this effort included:

- examining documents produced for these previous acquisition efforts (including comments provided by the public),
- interviewing agency employees involved in those and other related efforts, and
- interviewing members of the EWP Steering Committee who represent those likely to be the principal stakeholders in any acquisitions.

In particular, documents associated with the California Department of Water Resources (DWR) Supplemental Water Purchase Program (SWPP) and the 1991 and 1992 Drought Water Banks (DWBs) were reviewed and staff members associated with the DWBs were interviewed.

THE CALIFORNIA DEPARTMENT OF WATER RESOURCES SUPPLEMENTAL WATER PURCHASE PROGRAM

Program Description

The SWPP was an effort by DWR to acquire water from willing sellers to augment water supplies for some or all of the 29 State Water Project (SWP) water contractors between 1997 and 2002. Its primary purpose was to provide water to SWP contractors both north and south of the Delta during years when the water available from the SWP was expected to be less than entitlements under the long-term water supply agreements between DWR and the contractors. Water purchased through the SWPP was to come from two sources: stored surface-water supplies and groundwater substitutions. Stored surface-water purchases would involve streams tributary to the Sacramento–San Joaquin Delta, while groundwater substitutions would target primarily other areas of northern California. No water would be obtained through land following.

Initially, DWR estimated that approximately 400,000 acre-feet (af) of water would be available for purchase, with 200,000 af coming from stored surface-water supplies and 200,000

af from groundwater substitution. Existing SWP facilities were considered to be adequate for transferring purchased water.

The SWPP Draft Program Environmental Impact Report (PEIR) (State Clearinghouse No. 94082033) was written in 1996 and made available for public review in February 1997. DWR, the lead agency, prepared responses to the comments on the Draft PEIR and incorporated them into an administrative Final PEIR in August 1997. DWR never prepared a Final PEIR and eventually abandoned the SWPP because of widespread public concerns about the program.

Issues Raised

During the public comment period for the SWPP Draft PEIR, DWR received 159 comment letters. Much can be learned about the SWPP effort by studying these comment letters. Many were lengthy and provided comments on several issues. DWR staff categorized the comments into 41 issue areas, then grouped the categories to make it easier to review and respond to the comments. Seven primary issues were raised:

- inadequate public involvement and coordination with local interests;
- adverse effects on groundwater resources;
- adverse effects on third parties;
- adverse effects on biological resources;
- lack of specificity in describing the program and its effects;
- adverse cumulative effects and need for coordination between other programs; and
- concerns regarding water rights, area of origin, and “real” water.

This section summarizes the public concerns raised regarding each of these issues.

Inadequate Public Involvement and Coordination with Local Interests

A large number of commenters expressed concern that the California Environmental Quality Act (CEQA) process used by DWR involved inadequate public participation and notification. No public scoping hearings were scheduled, so members of the public did not have the opportunity to comment on the program as it was being defined. Though public scoping is not required by CEQA, local government agencies expressed concern that they were not informed about the SWPP in a timely manner. They felt that the SWPP was developed with little participation by stakeholders or the public.

Effects on Groundwater Resources

By far, the most comments received by DWR addressed concerns about groundwater resources in the Sacramento Valley. Comments regarding groundwater resources were grouped into six specific areas of concern:

- land subsidence,
- groundwater levels and availability,
- groundwater quality,
- compliance with local ordinances,
- neighboring wells, and
- adequate groundwater monitoring.

Each of these issues is discussed separately below.

Land Subsidence. Concerns relating to land subsidence focused on damage to aquifers, water wells, facilities for agricultural water supply and drainage, and urban infrastructure that could result from increased subsidence caused by the groundwater substitution portion of the SWPP. Commenters also expressed concern that flood protection would decline because of diminished levee freeboard resulting from increased subsidence. Several regions where participation in the SWPP was expected, such as western Yolo County, have already experienced some land subsidence. Commenters said that groundwater users could have to pay greater costs and encounter poorer quality water if they had to drill wells to greater depths because of land subsidence.

In the SWPP Draft PEIR, DWR stated that it would monitor for land subsidence and would curtail pumping where subsidence was discovered. In response to public comments, DWR revised the program so that direct groundwater substitution would not be initiated in areas of known land subsidence. However, DWR felt that a well-planned conjunctive use program could control land subsidence to minimize negative effects and stated that it would begin to monitor land subsidence in areas where groundwater substitution transfers would occur.

Groundwater Levels and Availability. DWR acknowledged in the SWPP Draft PEIR that acquiring water through groundwater substitution would probably affect local groundwater levels. With increased groundwater pumping, groundwater levels would be expected to drop, increasing the amount of energy used to extract groundwater and possibly decreasing well yields. Commenters on the SWPP Draft PEIR also noted that irrigation return flows play a significant role in recharging groundwater aquifers. If surface water was left in the river to be exported from the Delta between July and October rather than being used for irrigation purposes, it could amplify the problem of groundwater overdrafting.

Groundwater Quality. Within the Sacramento Valley, there are localized areas of poor quality groundwater. Some areas contain saline groundwater and others may contain naturally occurring elements such as boron, which can have an adverse impact on crops. Public concern focused on the extraction of groundwater adjacent to areas with poor groundwater quality, and the potential for this poorer-quality water to move toward the extraction wells.

The SWPP Draft PEIR stated that groundwater quality problems were not anticipated because DWR experienced very few problems during the operation of the DWB programs. However, commenters noted that during the 1992 and 1994 DWBs, the program's operations were limited and groundwater pumping and monitoring diminished. Therefore, from the public's perspective, DWR's conclusion about groundwater quality was not well substantiated.

Compliance with Local Ordinances. The DWB program was very unpopular with some members of the public, who perceived it to have resulted in the lowering of groundwater levels and, in some areas, groundwater quality. As a result of this and other factors, many counties, such as Yolo, Butte, and Madera, have developed and adopted ordinances limiting the transfer of groundwater out of its area of origin. Other counties have expressed fear that the SWPP would cause similar problems within their jurisdictions. In response to this concern, DWR reassured the public that transfers involving groundwater substitution would comply with all applicable federal, State, and local ordinances, and with local groundwater management plans.

Neighboring Wells. In parts of Yolo County, in Butte County, and in other areas of the Sacramento Valley, groundwater wells of stakeholders adjacent to areas that participated in the DWB programs experienced tangible damages such as lowering of the groundwater table, which resulted in increased pumping costs. DWR offered settlements to the affected parties, but none of the offers were accepted because they were not considered full compensation for damages. Therefore, many stakeholders believed they would not be properly compensated for SWPP-related damages.

Groundwater Monitoring. Stakeholders commented that groundwater resources must be monitored extensively before groundwater substitution programs are implemented because groundwater resources in the Sacramento Valley and their relationship to surface water are not understood well enough. In fact, many northern California agencies have been incorporating groundwater monitoring into their Assembly Bill 3030–inspired groundwater management plans, and stakeholders felt that many more are needed. Commenters stated that such groundwater monitoring programs should include a historical analysis, and that data should be collected and recorded continuously so that a solid baseline condition could be developed.

In its response to public comments, DWR stated that a “detailed and comprehensive groundwater monitoring program” was needed to avoid or minimize significant adverse impacts. Such a program would include monitoring groundwater levels and quality and land subsidence, and evaluating the data collected. However, the SWPP Draft PEIR did not outline a specific program because potential groundwater-related impacts would have been area specific, and it did not identify specific source areas for groundwater substitution transfers.

Third-Party Effects

Many stakeholders expressed concern about who was going to pay for third-party damages caused by the SWPP. Many felt that buyers of SWPP water should pay for any damages caused by the SWPP and that there should be aquifer-wide compensation for transferred water, similar to compensation offered for oil and gas extraction.

Stakeholders also expressed concern that money from water sales might not be spent in the county of origin, and that if a corporation reported these earnings outside of the county, it would not generate tax revenues for the county. They stated that counties that sell water should be compensated and that the SWP contractors should be charged according to the price of water in the area of use. They also felt that the price should be the market price and not a price set by DWR, as was the case with the DWB.

In addition, commenters noted that fallowing land to sell water increases social costs. DWR stated in its proposed responses to public comments that land fallowing was not proposed as part of the SWPP and that local economies would not be likely to suffer adverse impacts as a result of intermittent water purchases. Stakeholders pointed out that the California Water Code allows for limitations on water transfers if a local economy suffers.

Effects on Biological Resources

The California Department of Fish and Game (DFG) had six basic comments on the SWPP Draft PEIR:

- The effects on fish described in the document were not realistic. These included both the positive effects (improved river flows, lower water temperatures in the summer, increased Delta outflow) and negative effects (reduced carryover storage, lower flows in months subsequent to transfers, and increased Delta exports).
- The SWPP would not benefit fish overall, in contrast to the conclusion reached in the SWPP Draft PEIR.
- The State Water Resources Control Board (SWRCB) could require SWPP sellers to release water for Bay-Delta needs after they had already sold it to the SWPP.
- Minimum flows are not always adequate for the needs of fish.
- The future hydrology of streams would be impossible to predict.
- Changing Delta flows would violate the Delta Protection Act.

Lack of Specificity in Describing the Supplemental Water Purchase Program and Its Effects

Several commenters strongly recommended that, instead of the programmatic EIR, a separate site-specific EIR should be completed for each potential water transfer. One exception, however, was the Glenn-Colusa Irrigation District (GCID), which felt that the potential programmatic level environmental impacts warranted a program-level EIR. The GCID stated that site-specific EIRs would only look at impacts incrementally and would not reveal the true nature or magnitude of the whole program. The GCID also stated that the SWPP Draft PEIR,

which is full of admitted uncertainties, could not possibly cover all the environmental ramifications of all possible water transfers, which at the time had yet to be identified individually.

Cumulative Effects and Need for Coordination with Other Programs

Commenters wanted the SWPP acquisitions to be coordinated with other water acquisition and management programs. In 1996, those other programs included the Central Valley Project Improvement Act (CVPIA), CALFED, and the Central Valley Habitat Joint Venture Implementation Plan. Commenters felt that the SWPP Draft PEIR should have addressed the cumulative impacts of all these programs, which are perceived to be operating independently while sometimes trying to achieve the same goal. Commenters also stated that the SWPP Draft PEIR should have assessed the impacts of a drought on the effectiveness of all the programs. Finally, commenters stated that the SWPP should be administered through CALFED.

Water Rights, Area of Origin, and “Real” Versus “Paper” Water

Commenters stated that area-of-origin provisions in California water law give priority to users located in the area where the water source originates. Some stakeholders felt that this law has not been enforced to protect water rights in some locations of northern California, even though the U.S. Supreme Court has upheld it.

Commenters also stated that the Public Trust Doctrine holds that water is a community resource and that one’s right to use water is separate from one’s right to own water (a property right). Both surface water and groundwater are subject to area-of-origin provisions and the Public Trust Doctrine to varying degrees. Stakeholders expressed concern that when surface water is stored in a groundwater basin, or when groundwater is temporarily transferred to a surface reservoir to be later replaced by surface water, the rights to this water may be unclear. Is this water governed by its original set of doctrines and laws, or does it become subject to the doctrines and laws of its current medium? Stakeholders wondered if their groundwater rights would still exist after surface water was mixed with groundwater. They wanted their groundwater rights to remain intact.

Some commenters stated that water conservation would make the SWPP unnecessary. These commenters said that:

- SWP contractors should have to demonstrate how much “real” water they have conserved, and not how much “paper” water, before they are allowed to purchase SWPP water.
- SWP contractors also should have to demonstrate a real need for water before a transfer is allowed.
- Only surface waters or waters “created” through conservation should be marketed.

- Water “created” through conservation remains the property of the conserving water district.

DROUGHT WATER BANKS

Program Description

DWR initiated the DWB program in 1991 during California’s fifth consecutive year of drought, and again in 1992 and 1994. In 1991, both the SWP and the Central Valley Project (CVP) were forced to sharply reduce water deliveries to municipal and agricultural contractors. Water was so scarce that most suppliers doubted that the SWP and the CVP would be able to provide minimum carryover storage as protection against another dry year.

The DWB, as defined by DWR, was a purchasing and allocating mechanism used by DWR to buy water from willing sellers and to sell it to qualified buyers. Sellers such as farmers and water districts made deposits to the DWB by fallowing land, shifting crops, withholding irrigation, exchanging groundwater for surface water, and supplying surplus water stored in local reservoirs. DWR then sold the water to buyers, such as municipalities and water districts that had specific critical needs and allocation guidelines. The program was intended as a short-term measure in near-emergency water supply conditions associated with prolonged drought, natural disasters, or failures of water storage and water transfer facilities.

Drought Water Bank Results and Recommendations

Analyzing the results of the 1991 and 1992 DWB programs helped DWR to develop recommendations for water acquisitions and transfers and water marketing. Experiences gained during the 1991 DWB guided DWR as it implemented the 1992 DWB.

1991 Drought Water Bank

In 1991, the DWB purchased 820,805 af of water from users in the Sacramento–San Joaquin Delta region, Yolo County, and the Sacramento, Yuba, and Feather River regions. Sources included water generated by the fallowing of agricultural land and by groundwater replacement, and water stored in facilities on the Yuba and Feather Rivers. Land fallowing occurred mostly in the Delta; groundwater replacement and stored water releases originated mostly in the Yuba and Feather River regions.

In a 1992 report on the 1991 DWB (California Department of Water Resources 1992), DWR identified several areas for improvement in the program. Future DWB programs would be designed with the following objectives in mind:

- to reduce negative third-party impacts (e.g., impacts on local agriculture-based economies, groundwater basins, and the environment);
- to have a streamlined regulatory process with fewer institutional barriers to water transfers;
- to price water so that critical needs are consistently met; and
- to spread the burden of risk and finance for such a large-scale, multifaceted program.

To supplement the 1992 report, DWR contracted with three consultants to interview a representative sample of buyers, sellers, environmental organizations, and third-party interests to provide an independent evaluation of the DWB program. The results of this study, presented in a March 1992 report (Howitt et al. 1992), included the following recommendations:

- Notify stakeholders as early as possible that a DWB program is being formed.
- Develop and publish contracting guidelines that would be available when the formation of a new bank is announced.
- Use a dual-class system of contracts (early commitment and late commitment) to reward sellers and buyers who enter into early commitments.
- Use an acquisition strategy based on an announced maximum amount of water that will be acquired.
- Establish baseline water-use patterns for growers.
- Structure acquisition prices to reflect differences in yields from Delta land-fallowing contracts.
- Consider “stress irrigation contracts” in which an irrigator is paid to forgo one or two final irrigations.
- Rely on local agencies to manage their groundwater resources.
- Establish limits, which should not be the same for all areas, regarding the geographic concentration of land-fallowing contracts to avoid concentrating third-party impacts in a few areas.
- Avoid extending formal standing to third parties that are not specified under State law. The legislature should decide whether to extend standing to currently excluded third parties.

1992 Drought Water Bank

The 1992 DWB was implemented under less severe conditions than in 1991 and the demand for water was substantially lower. Approximately 158,768 af of water was purchased by the DWB from users in the Sacramento–San Joaquin Delta region, Yolo County, and the Sacramento, American, Yuba, Feather, Stanislaus, and Merced River regions. Sources of water included groundwater replacement and releases of stored water. Most water originated in Yolo County (Yolo Bypass) and in the Feather, Yuba, Stanislaus, and Merced Rivers. The 1992 DWB did not include land fallowing, which made the process of contracting for water much less complex than that for the 1991 bank.

Based on the 1991 experience, DWR made the following changes in the DWB when it implemented the 1992 program:

- No water was acquired until signed contracts were obtained from the purchasers of water.
- Water purchases were limited to groundwater substitution and surface reservoir storage contracts to minimize economic and environmental impacts (no water was purchased through the fallowing of agricultural lands).
- The price of water was considerably lower than in 1991 because of reduced demand and the elimination of fallowing.
- DFG was a direct purchaser of water from the bank and a member of the water purchase committee (the entity that administered contracts).

DWR summarized the bank’s effectiveness in a report titled *The 1992 Drought Water Bank* (California Department of Water Resources n.d.). Unlike the 1991 bank, water for the 1992 bank was purchased only to meet prior contractual commitments. The 1992 bank operated at a significantly reduced cost for water and had significantly fewer third-party impacts because, as mentioned previously, water purchased was limited to reservoir storage release and groundwater substitution contracts. Also, adverse impacts on fish and wildlife were avoided because land fallowing was eliminated, and because DWR coordinated operations with DFG on timing and surface-water releases and scheduled Delta exports during times of minimal impacts on fisheries. In its report on the 1992 DWB, DWR stated that more investigation is required regarding the areas of groundwater substitution and “real water” versus “paper water”.

CENTRAL VALLEY PROJECT IMPROVEMENT ACT WATER ACQUISITION PROGRAM

The USBR was involved with water transfers for the 1991 and 1992 DWBs. Also, since enactment of the CVPIA in 1991, the USBR has been acquiring and transferring water to meet CVPIA Section 3406(b)(3) requirements for the Anadromous Fish Restoration Program (AFRP)

and to meet “Level 4” water deliveries to certain wildlife refuges. These acquisitions are made through USBR’s Water Acquisition Program (WAP).

USBR water rights operations staff members provided the following insights regarding the DWB and water transfers in general.

- Some transfer proponents forget that concurrence by the USBR and DWR is needed for some water transfers, even though they are not direct parties to the transfer.
- Implementation of water transfers that involve “real” water are far easier than those that involve “paper” water. The latter are fraught with operational and water rights problems. Only pre-1914 water rights that are fully used by the landowner are available for water transfers.
- Only water conserved from consumptive use can be transferred, not the entire water right.
- Tracking water transfers can be difficult when the amounts of water transferred are small compared to streamflows.
- Water transfers should be conducted in a manner that ensures that downstream users do not lose the ability to use the water to which they have rights.
- Parties that are transferring direct-diversion water rights should be required to provide a history of their diversions to demonstrate that they are actually reducing water use.
- For water-rights holders with only direct-diversion rights, water transfers must occur during the period when sellers have a right to divert.
- Unknown variables, such as unexpected rainfall, can affect a water transfer.
- Conducting the required environmental documentation takes time. Even though transfers that last 1 year or less are exempt from CEQA, the USBR must comply with the National Environmental Policy Act (NEPA) when it has discretionary authority (for either acquiring water or approving a transfer). Also, during the water rights process, the SWRCB must find that the proposed transfer would have no unreasonable impacts. Therefore, some level of analysis is required even for nonfederal projects.

In addition to the above, WAP staff provided the following points.

- There is a need to create standard water acquisition processes for Level 4 and instream acquisitions. The purpose of these standard processes would be to improve efficiency, productivity, and participation through a transparent process clearly identifying agency and applicant responsibilities, opportunities for public input, and interactions of steps in the process. Key components of this effort should include:

- A flow chart systematically representing the water acquisition process, identifying steps in the process and responsible parties to accomplish each step.
 - Identification of applicant responsibilities and standard information needed from the applicant.
 - A water rights review of the acquisition proposal early in the process to identify information needs, critical issues, and water right actions required.
 - A standard process for negotiating water acquisitions and executing any required agreements/contracts.
- There is a need for more certainty in the availability of incremental Level 4 water supplies for a given year. Refuge managers need to know early in the calendar year what their incremental Level 4 water supplies would be in order to determine appropriate refuge management options for the year. Providing more certainty for incremental Level 4 supplies would involve numerous factors including:
 - Adequacy and timing of WAP funding for water acquisitions.
 - Development of long-term contracts and associated environmental documentation.
 - Increased communication with refuge managers.
 - Obtaining a backstop in San Luis Reservoir to provide a guarantee of Level 4 supplies.
 - There is a need for long-term (multi-year) contracts and associated environmental documentation for incremental Level 4 acquisitions to reduce administrative costs as compared to conducting acquisitions on an annual basis.
 - There is a need for better coordination and definition of duties between the WAP and USBR's area offices in processing of water acquisition transfers.
 - There is a need to coordinate the WAP with other water acquisition programs, especially with the CALFED EWP and Environmental Water Account (EWA). The purpose of this coordination would be to encourage more efficient use of water for environmental purposes, promote multiple beneficial uses of water, and promote identification, disclosure, and potential for avoidance or reduction of cumulative impacts.

- Given the current energy situation in California, use of energy associated with water acquisitions needs to be carefully analyzed. The viability of some water acquisitions may be affected by the cost of energy, impacts on power generation, or the need to conserve energy (especially during summer and peak power-use times). Environmental documentation for water acquisitions needs to look closely at potential impacts on energy resources.
- There is a need to prioritize watersheds where instream water rights acquisitions would occur and to determine the flow acquisition needs for each watershed. The purpose is to most efficiently use limited funds available to maximize instream benefits by ensuring that meaningful increases in flows are provided in watersheds most likely to benefit from these increased flows. These efforts would also allow outreach efforts to be focused effectively in areas where acquisition efforts would be concentrated.
- There is a need to establish the benefits of increased instream flows through monitoring and assessment of the ecological benefits of these flows. Use of a science-based approach would demonstrate whether acquired instream flows are resulting in measurable ecological benefits.
- There is a need to establish a standard methodology for valuation of permanent instream water rights. This would provide an established basis for negotiating the price of the acquired water.
- There is a need to ensure that water rights acquired for fishery benefits are adequately protected through water right actions, including County Superior Court and SWRCB (Water Code Section 1707) actions.
- It would be advantageous and economical for the incremental refuge water supplies to include access to intermittent supplies that come from SWP interruptible supplies and CVP “215” water supplies. There would be a need to perform the necessary NEPA documentation, identify and contract with partners to provide conveyance or exchanges for those types of supplies, seek necessary changes in water rights (such as Friant Division purpose of use and SWP place of use), and prepare boilerplate contracts that could be executed quickly while such intermittent water supply is available.

LESSONS LEARNED

The following are the principal lessons learned from this research (not listed in order of priority) that could be applied to implementation of the EWP:

- The public must be extensively involved in EWP development from definition through implementation to ensure that the program is successful.

- Third-party effects on local economies and labor forces and other legal users of water that result from water acquisition activities, such as the fallowing of agricultural lands and groundwater replacement programs, need to be properly addressed. Appropriate compensation should be provided to those affected. Effective community outreach programs must be developed to help local governments deal with potential adverse effects of water acquisitions on third parties.
- The effects of acquisitions on source-area groundwater resources—supplies, levels, quality, pumping costs, and land subsidence—need to be sufficiently analyzed, and sufficient monitoring of effects must be included in the mitigation.
- The biological effects, including benefits, of increased instream flows should be measured and established through monitoring and assessment. Use of a science-based approach would demonstrate whether acquired instream flows are resulting in measurable biological benefits.
- Water acquisitions should be developed through partnerships with local interests. In some cases, this should include partnerships for CEQA and NEPA compliance.
- In the CEQA and NEPA processes, potential socioeconomic effects, effects on groundwater, and cumulative effects of water acquisitions and transfers must be disclosed. Also, sufficient time needs to be allowed to conduct the required environmental review, the public must be extensively involved, and there must be full disclosure of information. A cooperative effort between local stakeholders and government entities is essential.
- The environment and users of water should equally share in bearing the risks associated with water acquisitions and transfers; the risks should not be borne solely by agricultural entities.
- The EWP must be coordinated with other water acquisition programs (the EWA, CVPIA WAP, Refuge Level 4, and the drought program currently being developed by DWR). Stakeholders want one streamlined regulatory process with few institutional barriers.
- Coordinating acquisitions by the EWP, EWA, WAP, Refuge Level 4, and DWR drought program is also essential if benefits are to be maximized and water costs are to be minimized.
- Water must be acquired at fair market prices.
- Water rights and area-of-origin provisions need to be respected during the water acquisition process. Water acquisitions and transfers must not inhibit the ability of other legal users of water to use the water to which they have rights.

- An effective water tracking or accounting system will need to be developed to ensure proper delivery of environmental water to its intended destination (or destinations, if the water transfer is for multiple uses).
- Great care must be exercised to ensure that “real” water is acquired.
- The ability to retain local control over surface water and groundwater resources is a primary concern to stakeholders.
- Development and implementation of the EWP must remain flexible for the program to succeed. Stakeholders want assurance that they can work with the agencies to develop creative solutions.
- Opportunities for EWP water to provide multiple benefits will need to be explored, developed, and implemented.
- The EWP must incorporate good science with scientific review and be based on adaptive management principles.
- EWP ecosystem objectives must be clearly defined and measurable based on well developed criteria.
- Acquired water should be adequately protected through actions enacted by County Superior Courts and the SWRCB (Water Code Section 1707).

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